

A NEW SPECIES OF *PHYTOSEIUS* RIBAGA
(ACARINA : PHYTOSEIIDAE) FROM APPLE IN AUSTRALIA

H. A. DENMARK* AND E. SCHICHA†

[Accepted for publication 19th June 1974]

Synopsis

Phytoseius fotheringhamiae n. sp. (Acarina : Phytoseiidae) is described from apple in New South Wales, Australia. It is closely related to *Phytoseius woodburyi* DeLeon.

INTRODUCTION

The species of phytoseiid mite described in this paper was collected from apple trees at Bathurst, New South Wales. It was found mainly on the undersides of leaves in orchards of young unbearing apple trees, in commercial orchards of Granny Smith apple trees and on single neglected apple trees ("backyard trees") during the years 1971 to 1973.

Genus *PHYTOSEIUS* Ribaga

Phytoseius Ribaga, 1904, *Riv. Patol. Veg.*, 10 : 177

Phytoseius (*Phytoseius*) *fotheringhamiae*, n.sp.

(Figs 1-8)

Diagnosis. *Phytoseius fotheringhamiae* n. sp. is closely related to *Phytoseius woodburyi* DeLeon from which it is distinguished by the following characteristics. The lateral and the anterior sublateral setae are longer in the new species than in *P. woodburyi*. The clunals are serrate in the new species but smooth in *P. woodburyi*. A pair of large pores caudomedial to M_1 in the new species is missing in *P. woodburyi*. The cervix of the spermatheca in the new species is much longer than in *P. woodburyi*.

Measurements listed are the mean and standard deviation of 20 specimens in microns, if not otherwise indicated.

* Division of Plant Industry, Florida Department of Agriculture and Consumer Services, Gainesville, Florida, 32601, U.S.A. (Contribution No. 275.)

† N.S.W. Department of Agriculture, Agricultural Research Station, Bathurst, New South Wales, 2795.

FEMALE

Dorsum : (Fig. 1) The dorsal shield, length 293 ± 6 , width at L_4 132 ± 3 , is rugose and bears 15 pairs of setae (inclusive S_1), eight lateral, one median, three dorsal, one pair each of clunals and verticals, and one pair of anterior sublateral setae S_1 (on the dorsal shield). The setae measure in length : verticals 35 ± 2 ; D_1 , D_2 , D_3 and $M_1 = 4.5 \pm 0.5$; clunals 8 ± 1 ; $L_1 = 52 \pm 4$; $L_2 = 16 \pm 2$; $L_3 = 30 \pm 2$; $L_4 = 12 \pm 2$; $L_5 = 115 \pm 7$; $L_6 = 83 \pm 4$; $L_7 = 82 \pm 5$; $L_8 = 86 \pm 4$; anterior sublaterals (S_1) 50 ± 2 . Setae L_1 , L_5 , L_6 , L_7 , L_8 , S_1 and the verticals

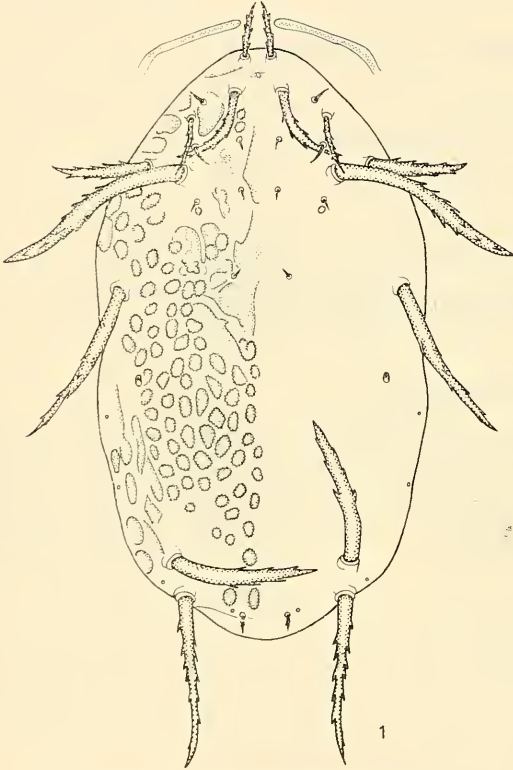


Fig. 1. Dorsal shield of female.

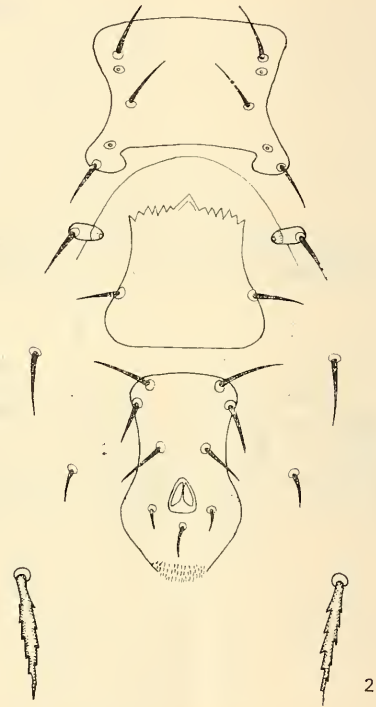


Fig. 2. Venter of female.

are serrate, L_3 and the clunals are slightly serrate. All other setae are smooth. Setae S_1 , L_1 , L_5 , L_6 , L_7 and L_8 are unusually thick. There is one pair of large pores posterolaterally, one pair of large pores caudomedial to the first median setae (M_1), and one pore between the vertical and L_1 . Peritremes extend to the vertical setae.

Venter : (Fig. 2) (Measurements of holotype only) Sternal shield, length 63, width 91, smooth with three pairs of setae. Setae IV are on oval shaped metasternal shields. Genital shield, length 94, width 101, normal with a pair of genital setae. Ventrianal shield, length 119, width 64, elongate vase shaped with three pairs of preanal setae.

Chelicerae : (Fig. 3) The fixed finger measures 36 ± 1 (ten measurements) in length and is provided with three teeth and a pilus dentilis. The movable finger, length 40 ± 1 , has a single tooth.

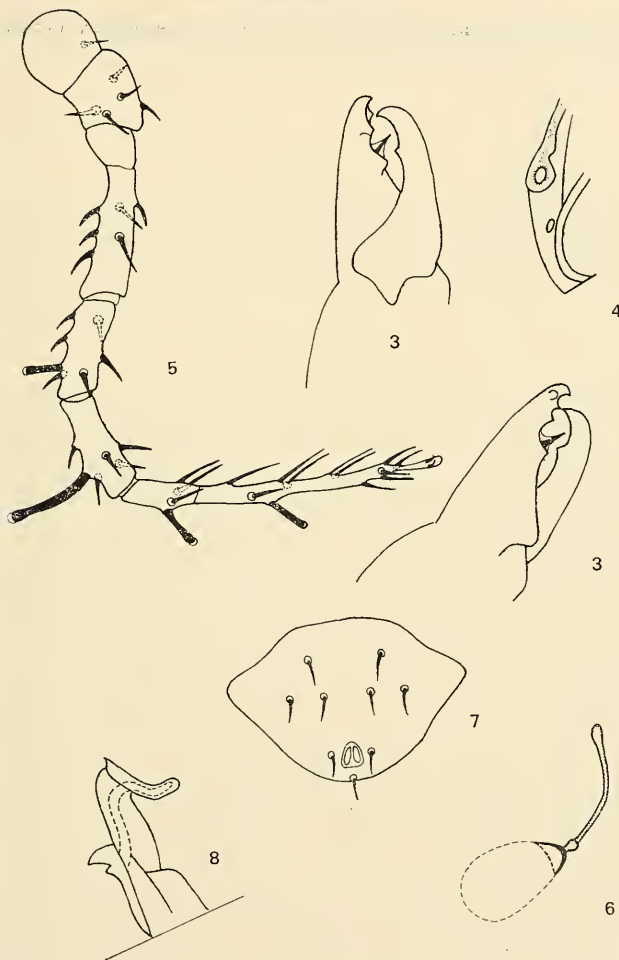
Peritrematal shield : (Fig. 4).

Length of macrosetae on leg IV as follows: (Fig. 5) Sge IV 17 ± 2 ; Sti IV 49 ± 3 ; St IV₁ 25 ± 3 ; St IV₂ 20 ± 2 ; Genu II $2, \frac{2 \cdot 2}{0}, 1$; Genu III $1, \frac{2 \cdot 2}{0}, 1$.

Spermatheca: (Fig. 6) (Two measurements) With cup or bowl shaped cervix. The major duct is 35–40 long. The atrium is 5 broad and 4–5 long. The cervix has a diameter of 12–14 where it joins the vesicle.

MALE

Dorsum: (Measurements of three specimens) Length 260–274, width 120–130, smaller than female; the chaetotaxy and the shape of the setae resemble those of the female. The setae are, however, relatively shorter. Verticals =



Figs 3–8. 3. Chelicerae of female. 4. Peritrematal shield of female. 5. Leg IV of female. 6. Spermatheca of female. 7. Ventrianal shield of male. 8. Spermatodactyl of male.

29–33, D₁, D₂ and D₃ all approximately 4; M₁=5–6, clunals=6–7, L₁=38–46, L₂=12–17, L₃=25–29, L₄=12–13, L₅=70–80, L₆=48–62, L₇=51–55, L₈=43–49, anterior sublaterals (S₁)=35–43.

Venter: Ventrianal shield (Fig. 7) smooth with three pairs of preanal setae.

Spermatodactyl: (Fig. 8) Spermodactyl has a terminal heel and its lateral process is distinct (no crest present on shank).

Type. Female holotype from Bathurst, N.S.W., Australia, January, 1971, E. Schicha, on leaves of sprayed Granny Smith apple trees. Deposited in South Australian Museum, Adelaide, S.A., Australia.

Paratypes. Eight females and four males taken with the holotype from the same locality. Deposited as follows: four females and two males at Biological and Chemical Research Institute, Rydalmere, N.S.W., Australia; two females and one male at Division of Plant Industry, Florida Department of Agriculture and Consumer Services, Gainesville, Florida, U.S.A.; two females and one male at South Australian Museum, Adelaide.

Reference

DELEON, D., 1965.—Phytoseiid mites from Puerto Rico with descriptions of new species (Acarina : Mesostigmata). *Fla Ent.*, 48 : 121–131.